

REMARKS/ARGUMENTS

Drawings

The Examiner objected to certain drawings as submitted. Applicant has submitted three sheets of proposed drawings herewith to replace sheets 1, 2, and 4 as originally submitted. The newly submitted drawings include a FIG 11 depicted the system, processor, memory, adapter card, and interconnecting busses that were described, but not depicted, in the originally submitted application. Applicant has introduced the new drawing to comply with the 37 CFR § 1.83(a) requirement for showing each element claimed. Because these elements were described in the application and because these elements are extremely well known in the field, Applicant would respectfully submit that the addition of FIG 11 does not add any matter that was not disclosed in the original specification sufficiently to enable one skilled in the art to make and use the invention.

Applicant has amended FIG 1 to replace the cross-section markings A-A and B-B with 2-2 and 3-3 respectively and amended the specification accordingly pursuant to the Examiner's request.

Applicant has added hatching to FIG 2, 3, 8, and 10 pursuant to the Examiner's request.

In response to the Examiner's remarks regarding duplication of reference numeral 107, Applicant has amended the specification to eliminate the redundancy.

Specification

Applicant has amended the title of the application pursuant to the Examiner's request. Applicant believes that the amended title is more fully descriptive of the claimed invention.

Applicant has amended the specification to clarify the reference to the receptacle being perpendicular to a plane defined by the adapter card. The original text of the specification indicated an adapter card bracket 123 while the claims referred to the adapter card itself. Because the disclosed bracket did not add to the inventive concept and because the bracket was not referred to in the claims, Applicant has eliminated references to the bracket and replaced them with references to the adapter itself. This change is consistent with the claim language and

does not, therefore, add new matter to the specification. It merely clarifies the characteristics of the claimed assembly. In addition, Applicant has included text in the specification to define the "plane defined by the adapter card" as the plane in which the adapter card lies. Because an adapter card includes a printed circuit board which is inherently planar, Applicant believed that the original text sufficiently identified the plane to which the connector receptacle was perpendicular and the amended specification language has been added merely to clarify what was presented previously and not for purposes of altering the scope of the claimed invention or for any reason related to patentability.

With respect to the Examiner's indication that the processor, memory, and bus described have not been described, Applicant would respectfully submit that these elements are so universally present and known in the field of microprocessor-based data processing systems that the mere mention of these elements conveys the elements adequately to enable one skilled in the art of make or use the invention. The novelty of the present invention lies in the connector itself. The primary application of the invention emphasized in the specification is in conjunction with a data processing system and an adapter card thereof. For this reason, detailed description of the data processing system and adapter card is not necessary to enable one skilled in the field to make and use the invention in the context of the data processing system and adapter card.

Claim Objections

Applicant has amended claims 4, 11, 14, and 21 pursuant to the Examiner's requests.

Claim Rejections under 35 USC § 112, second paragraph

The Examiner rejected claims 1-30 under Section 112, second paragraph. In response, Applicant has amended the claims to correct the specific rejections noted by the Examiner. Most of these amendments are administrative. Worthy of specific note, however, all references to "probe body contacts" and the like have been amended to recite "probe contact elements" and this terminology is carried throughout the claims.

Claim Objections under 35 USC § 102(e)

Claims 1, 2, 11, 12, 21, and 22 were rejected under Section 102(e) as anticipated by R (USPN 6,439,932 B1). In response to this rejection, Applicant has deleted claims 11 and amended independent claims 1 and 21. Amended claims 1 and 21 recite that the probe of the contact assembly is rotatable from a first position in which the probe contact elements do not contact the receptacle contact areas to a second position in which the probe contact elements contact the receptacle. Support for this amendment is found in the specification as filed at the paragraph beginning on line 7, page 7 and following.

The cited reference fails to teach or suggest this limitation. R describes a cylindrical male element that is inserted into a female element such that contact structures on the male element contact conductive rings in the female element when the male element is fully inserted. It is apparent from the description and drawings, however, that R does not disclose or suggest that electrical contact between the male and female contact elements is dependent upon the rotational position of the male element with respect to the female element. To the contrary, it is apparent that R teaches a contact assembly in which the rotational position of the two elements has no bearing on whether the electrical connection is maintained or not. In addition, R describes as a major part of its invention that the contact elements are positioned such that electrical connection is not achieved until the male element is fully inserted. Thus, R has chosen a specialized spacing of the contact elements as a mechanism for preventing premature electrical contact. Because R teaches an effective mechanism for preventing premature electrical connection, R provides no motivation to prevent electrical connection based on the relative rotational position of the two elements. In addition, the embodiment of R depicted in FIG 3 does not permit any rotational adjustment between the elements and does not, therefore, provide suggestion of motivation to modify the disclosure to include rotationally dependent contacts.

Because the cited reference does not disclose or suggest elements recited in independent claims 1 and 21 as amended herein, Applicant would respectfully request the Examiner to reconsider and withdraw the anticipation rejection of independent claims 1 and 21 and all claims depending thereon.

In addition to the foregoing, Applicant has added a new independent claim 31 that recites a connector assembly in which the receptacle contact areas are equally spaced along an axis of

the receptacle and where the probe contact elements are similarly equally spaced along an axis of the probe contact outer surface. Support for this amendment is taken from the drawings of FIG 1 (see elements 108) and FIG 9 (see elements 172).

The cited reference fails to teach or suggest the limitations of claim 31 as presented herein because the cited teaches away from the concept of equally spaced contact elements. The entire concept of R is the use of uniquely spaced electrical contacts so that no two contacts make simultaneous connection until the male element is fully inserted. Because uniquely spaced contacts are the emphasis of R, R does not motivate one to incorporate equally spaced contacts as claimed in claim 31 as presented herein. The use of equally spaced contacts is highly beneficial in cases of high pin counts, where adherence to the unique spacing taught by R would be difficult if not impossible. Because the cited reference fails to disclose or suggest equally spaced contacts, Applicant would respectfully request the Examiner to recognize claim 31 and its dependent claims as reciting matter that is allowable over the cited references.

In addition to the foregoing, Applicant has amended claims 6 and 26 and introduced new claims 36 reciting that the probe cover is a two-pieced probe cover that effectively covers the probe contact elements in a first position and exposes the probe contact elements in a second position so that the probe contact elements can make electrical connection to the receptacle contact structures when the probe cover is in the second position. There is no suggestion or motivation found in R to modify R to incorporate a probe cover. A probe cover is made unnecessary by the unique spacing of the contact elements in R. Electrical connection between mismatched connection points is prevented from occurring by the unique spacing. Modifying R to include a rotatable probe cover would add cost and complexity to the design without adding functionality because the unique spacing already achieves the desired effect, namely, control over when electrical contact between the male and female elements is made. Applicant would respectfully request therefore, the R fails to motivate one to modify R to incorporate a two piece probe cover for the purpose of controlling when electrical connection occurs. For this reason, Applicant would submit that claims 6, 16, and 36 recite matter neither taught nor suggested by the cited reference and Applicant would respectfully request the Examiner to reconsider and withdraw the rejection of these claims.

In the present response, Applicant has responded to the Examiner's drawing objection, specification objections, claim objections and claim rejections under 35 USC §112, second paragraph. In addition, Applicant has responded to the Examiner's rejection of pending claims 1-30 under 35 USC §§ 102(e) and 103(a). Accordingly, Applicant believes that this response constitutes a complete response to each of the issues raised in the office action. In light of the amendments made herein and the accompanying remarks, Applicant believes that the pending claims are in condition for allowance. Accordingly, Applicant would request the Examiner to withdraw the rejections, allow the pending claims, and advance the application to issue. If the Examiner has any questions, comments, or suggestions, the undersigned attorney would welcome and encourage a telephone conference at 512.428.9872.

Respectfully submitted,



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Attachments